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The

ECLECTIC

SYSTEM OF

INDUSTRIAL

Freehand and Perspective

DRAWING

By

Christina Sullivan

Van Antwerp Bragg & Co.

Cincinnati · New York.

FOLGER-CIN.

Name: _____ School: _____

DIRECTIONS FOR BOOK VIII.

Objects of Book VIII.—Exercises in Design, Mechanical Drawing, Perspective and Object Drawing continued. Selections from the "Grammar of Ornament" of designs for surface decoration.

Page 1.—Repeat exercise 1 on the right half of the page.

NOTE.—Either one or both of the small figures may be drawn, enlarged, on an extra blank if the pupil so desires.

Page 2.—Complete exercises 1 and 2.

Page 3.—Repeat Guilloche enlarged, in the given rectangle.

Page 4.—Repeat the given exercises on the lower half of the page.

Page 5.—Draw a vertical guide line through the cluster of daisies, and repeat the same on the given vertical line.

Page 6.—Construct a geometrical form on the blank space and and decorate the same with a design from the daisy.

Page 7.—Complete the design according to the finished section. Draw a vertical line and a horizontal line through the center of the figure; complete the square, and draw the diagonals.

Page 8.—Pupil will construct an outline, and in this arrange a design for a stained glass window. The designs given on this page will be used as *suggestions* only.

Pages 9 and 10.—Repeat the given exercises on the right half of the page.

Page 11.—Complete the design from the leaf of the Virginia Creeper according to the finished section.

Draw a vertical and a horizontal line through the center of the figure; complete the square, and draw the diagonals.

Page 12.—Pupil will execute a drawing from an object or group of objects arranged under the direction of the teacher.

NOTE.—A variety in the work may be secured by having different groups of pupils draw from different objects.

Page 13.—Repeat the given problems on the right half of the page.

Page 14.—Repeat the horizontal border, enlarged, in the given rectangle.

Page 15.—Make a perspective drawing according to the given problem.

EXPLANATION.—From the point of sight move down on the vertical line 1¼ in., and draw the base-line parallel to the horizon.

Place the base of the block, a six foot square, in perspective. Divide the front line of the base into two equal parts. From the right hand corner of the base erect a vertical 9 feet high, and from the top of this draw a line to the point of sight. From the middle of the front line of the base, draw a vertical to this vanishing line; from the top of this vertical move out on each side 2 ft., and draw a horizontal line, and then draw the remaining outlines of the block.

Page 16.—On the right of the vertical line make a perspective drawing according to problem 2.

EXPLANATION.—From the Prime Vertical move to the right on the base-line 10 feet (2½ inches); at this point locate the nearest point of the diameter *e*. As the circle is 6 feet in diameter, move from the point *e* 3 feet each way on the base-line, and locate the points *a* and *b*. Draw the geometrical plan and the perspective square and circle according to the given explanation, and strengthen the outlines of both circles.

Page 17.—Repeat the perspective view of the arch or make a drawing of an object or group of objects.

Page 18—Repeat the problem on the given lines on the right half of the page.

Page 19.—Construct an oval according to the explanation given on page 18, and arrange on this base a design for decoration for a ceiling.

Let the axes of the oval be of the same length as those given on the right half of page 18.

Page 20.—Repeat the spray of the Vinca on the given line on the right half of the page.

Page 21.—On the given horizontal line construct a square, and in this arrange a design for surface decoration, using the conventional forms of the Vinca as elements of design.

Page 22.—On the given horizontal line, *ab*, construct a pentagon according to the given explanation.

Page 23.—Complete the design in pentagon according to the finished section.

NOTE.—If the pupil so desires, he may arrange these same elements in a new design in the practice book.

Page 24.—Construct a pentagon, and on this base arrange a design suitable for wall decoration around a gas bracket.

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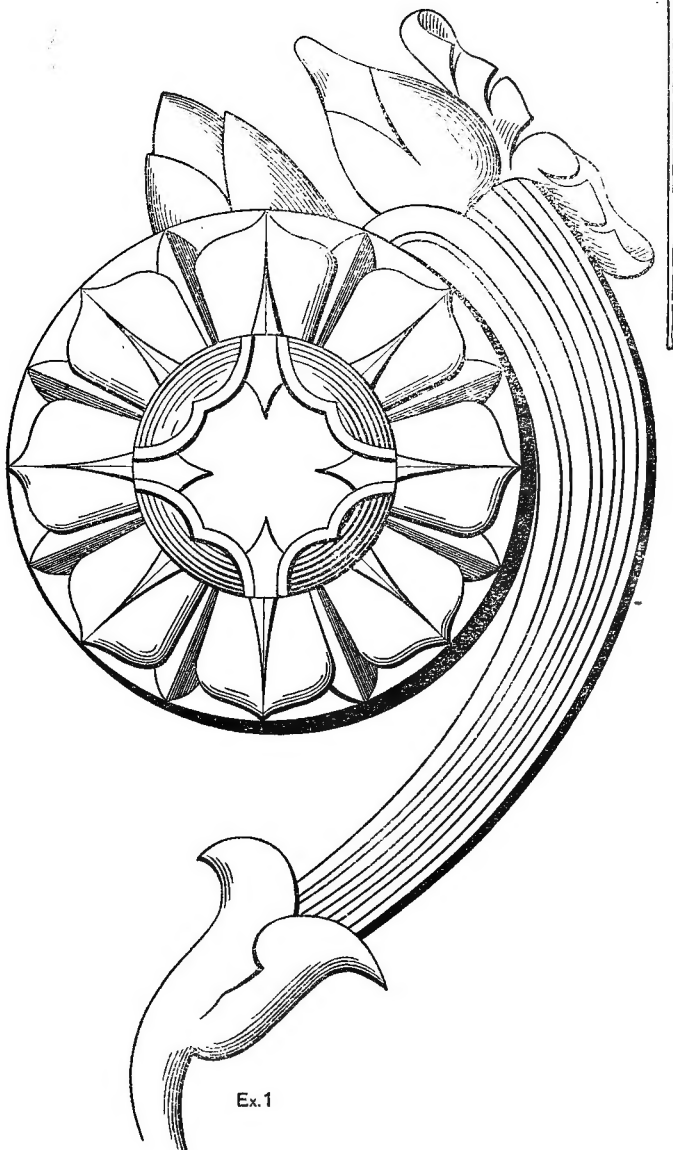
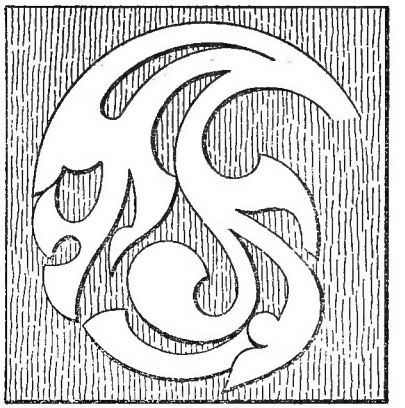
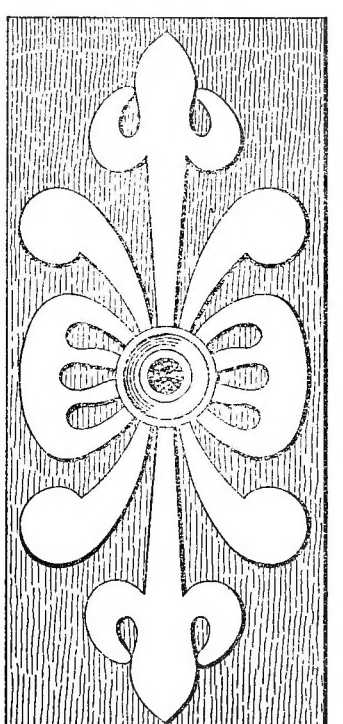
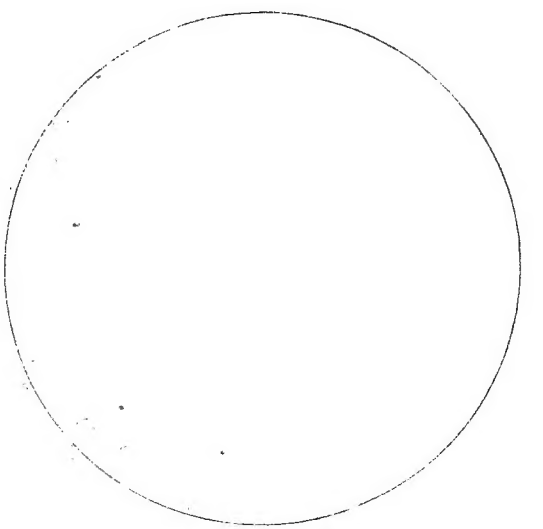
Hindoo Ornament.



Ex. 1







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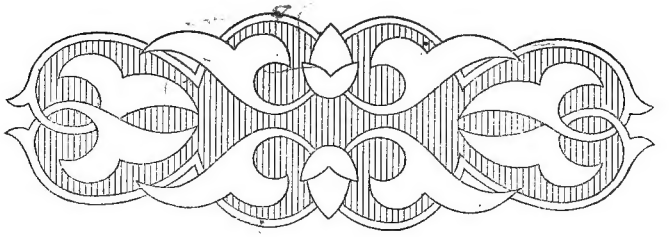
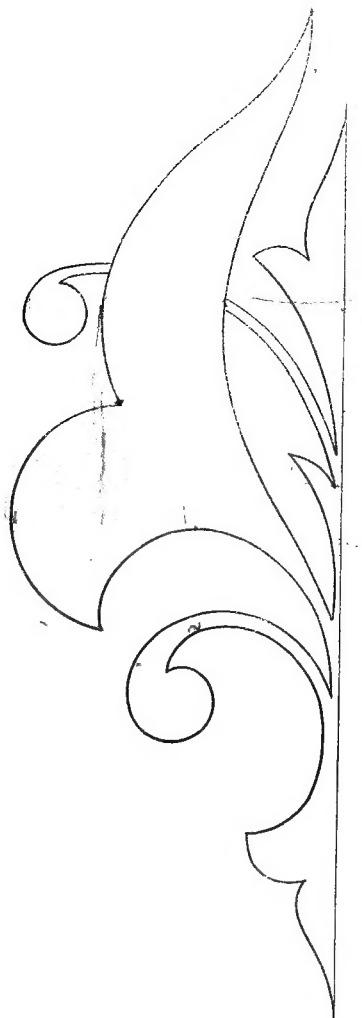
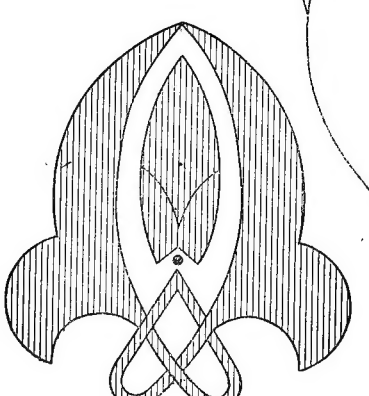
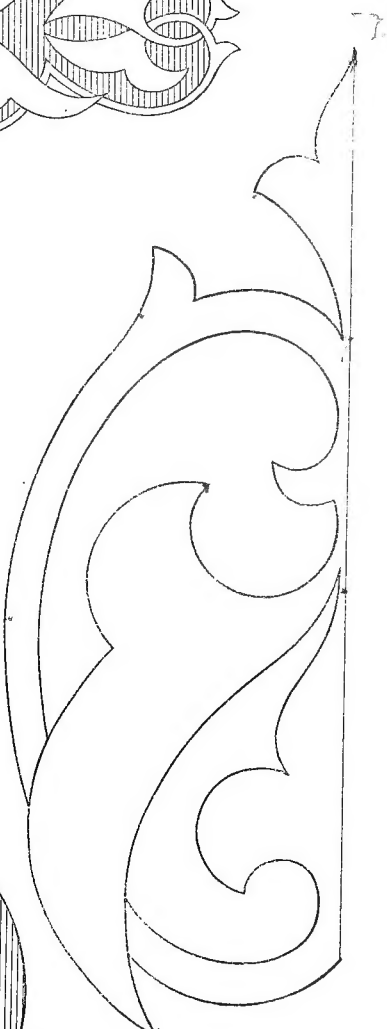
Moresque Ornament.





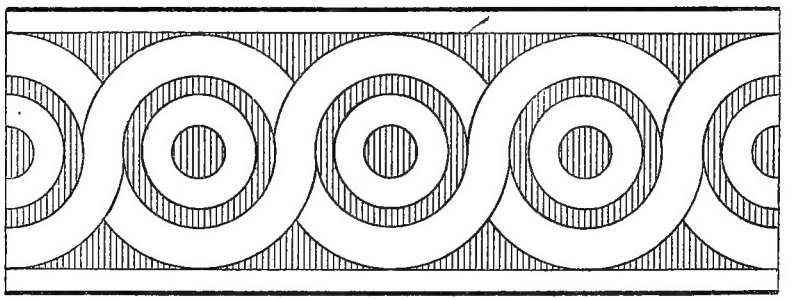
Ex. 1



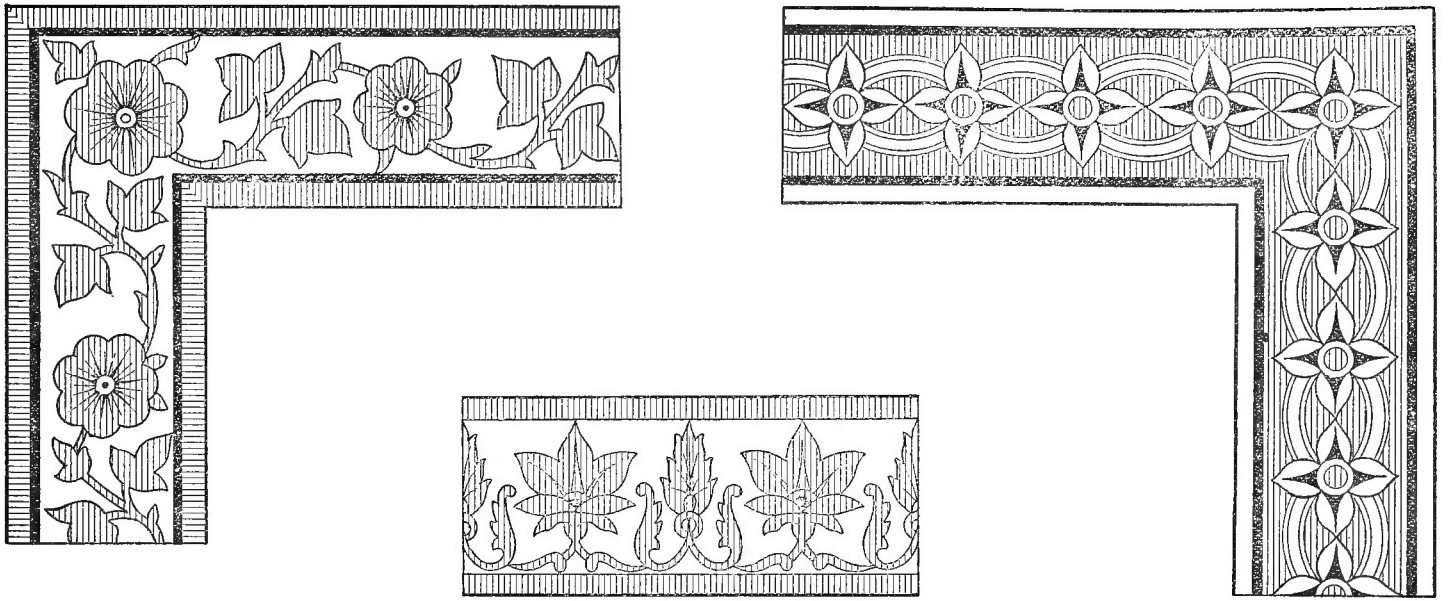


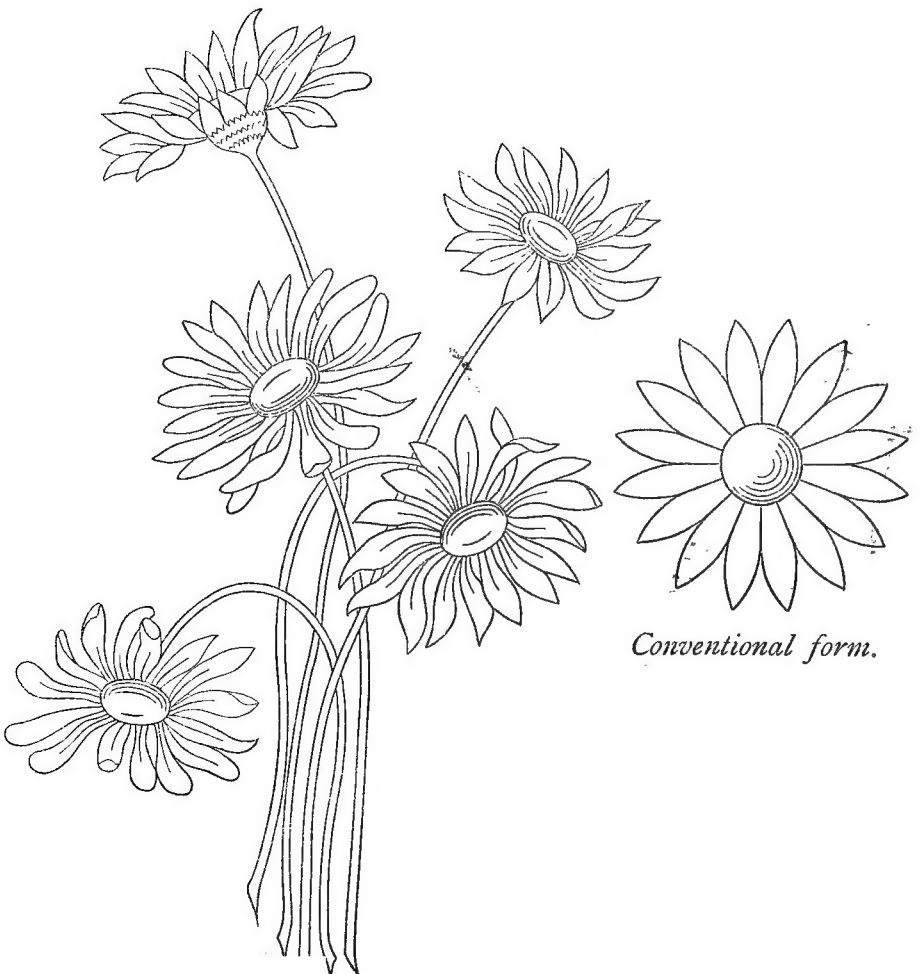
Ex. 2

Guilloche.



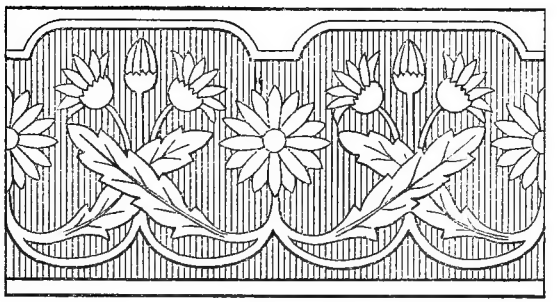
Corners and Border.





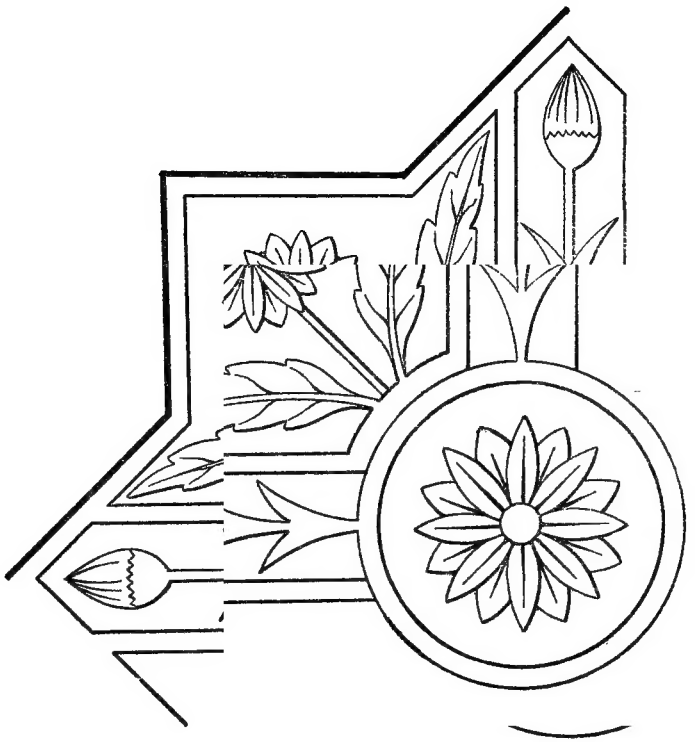
Conventional form.

Daisy from Nature.

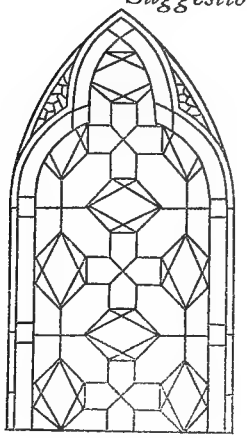


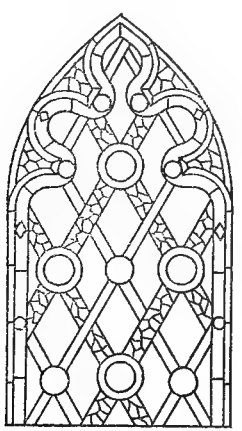
Design from Daisy.

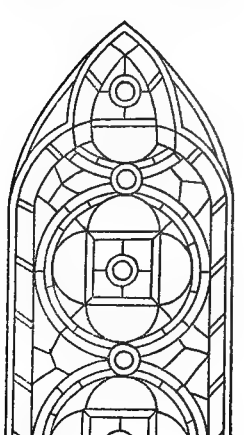
Daisy.



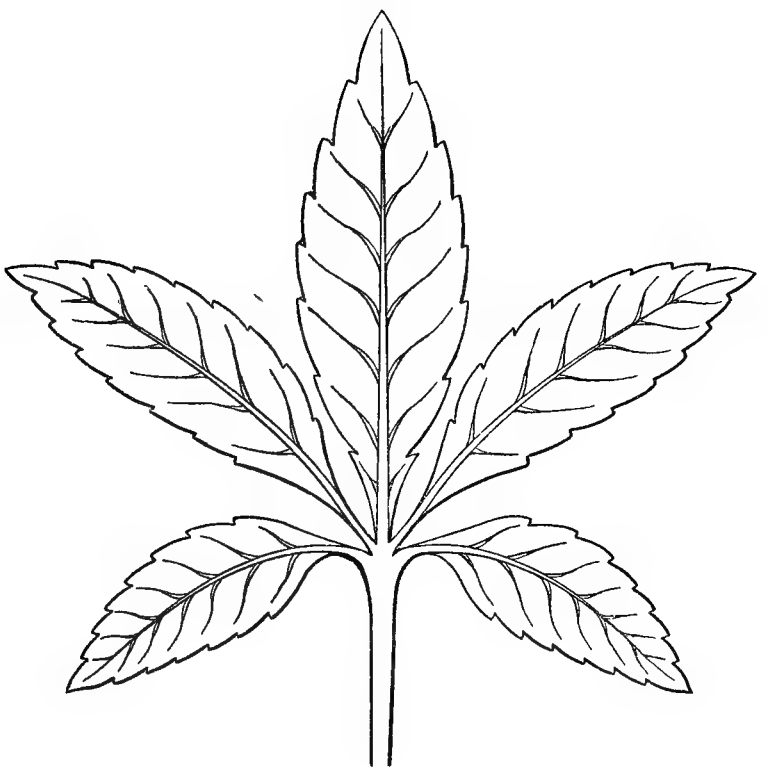
Suggestions for Design.





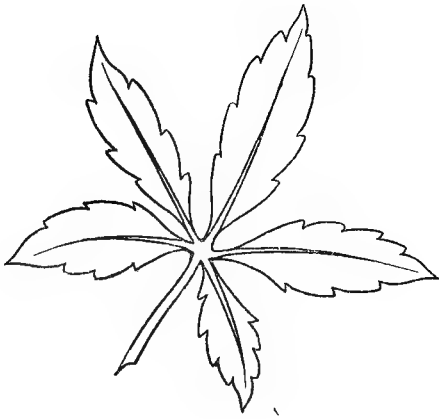


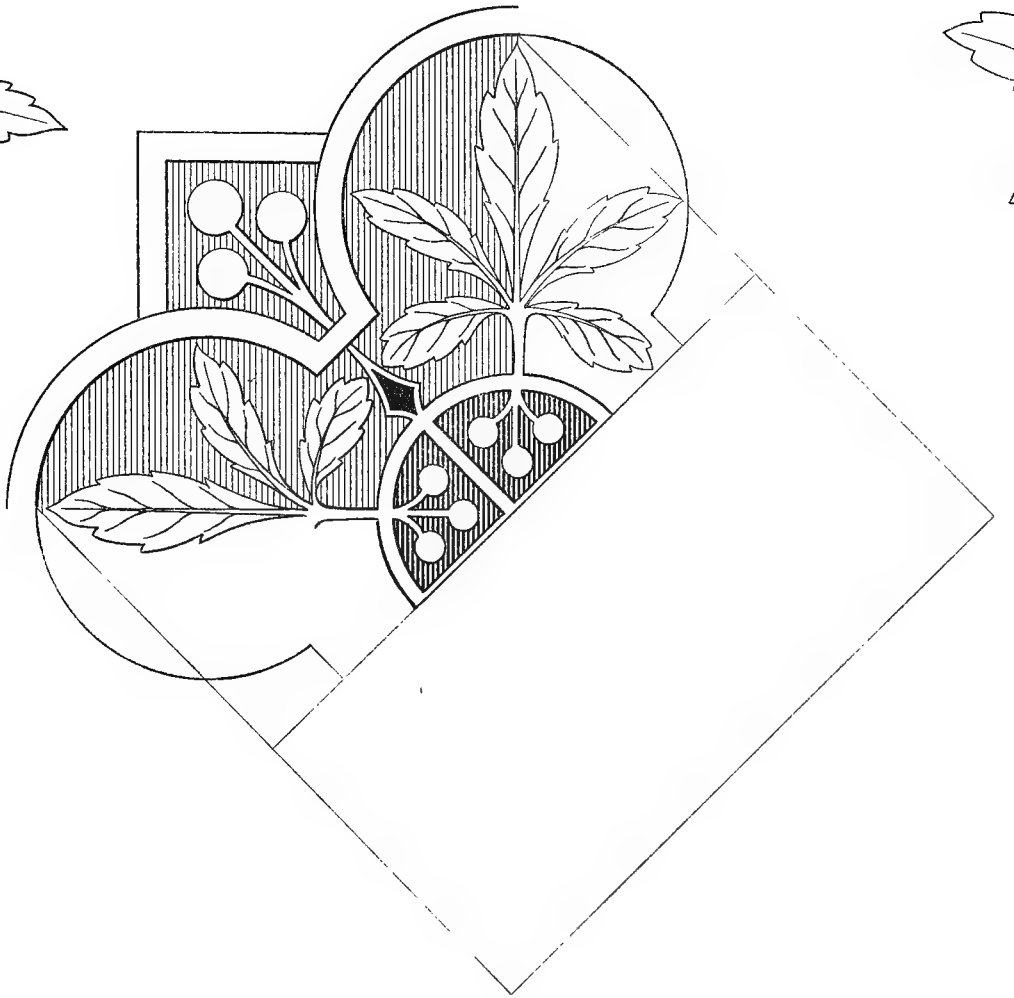
Original Design for Stained glass Window.

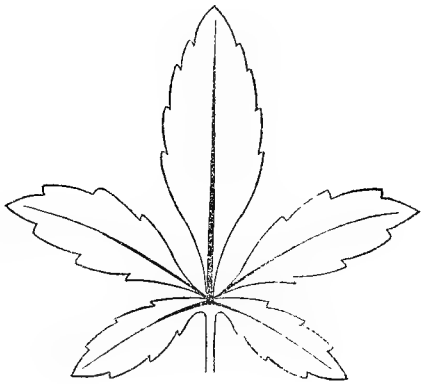


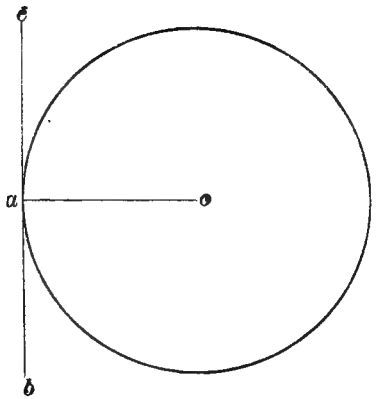
Virginia Creeper.

Virginia Creeper.



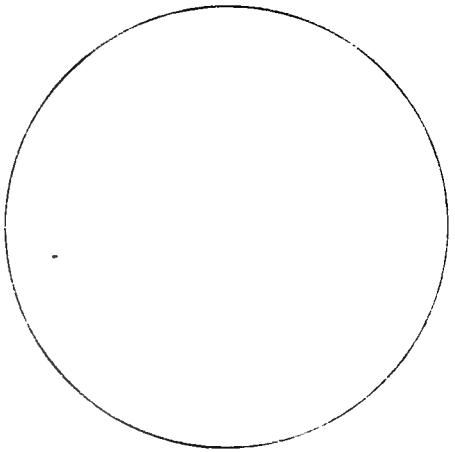


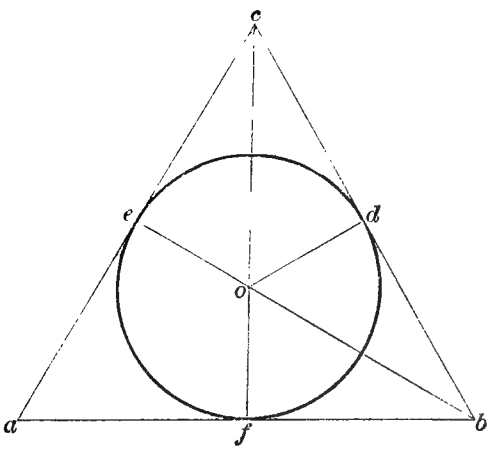




PROBLEM.—*At a given point in a circumference to draw a tangent to the circumference.*

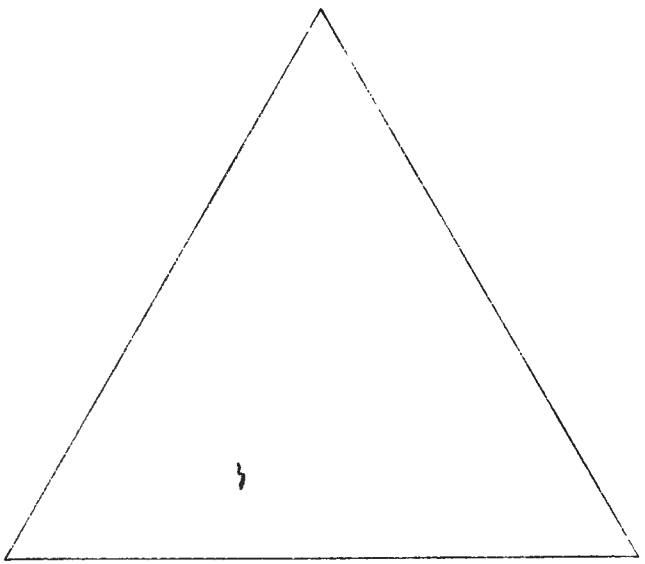
Let *a* be the point on the circumference. Draw the radius *oa*. Through the point *a* draw *cab* perpendicular to *oa*. *bc* will be the required tangent.



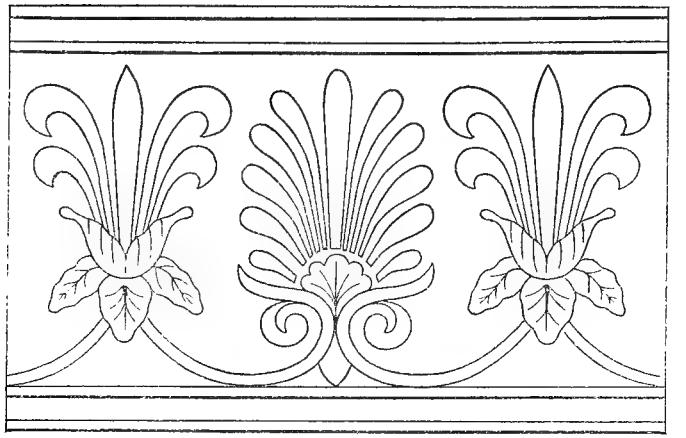


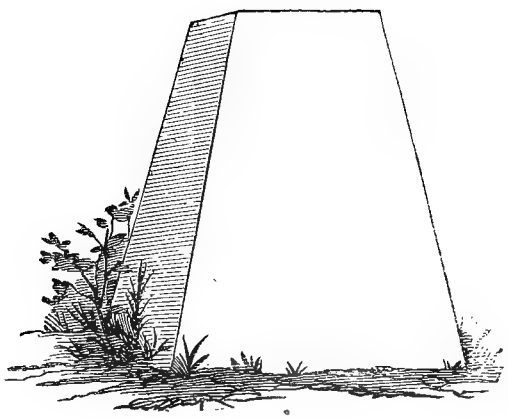
PROBLEM.—*To inscribe a circle in a triangle.*

Let *abc* be the given triangle. Bisect any two of its angles, as *b* and *c*, by straight lines which meet in the point *o*. From *o* let fall the perpendiculars *od*, *oe*, and *of* upon the three sides of the triangle; these perpendiculars will be of equal length, hence the circumference of a circle, with *o* as a center, and *od* as a radius, will pass through the three points *d*, *e*, and *f*, and be tangent to the sides of the triangle at these points, and will be the required circle.



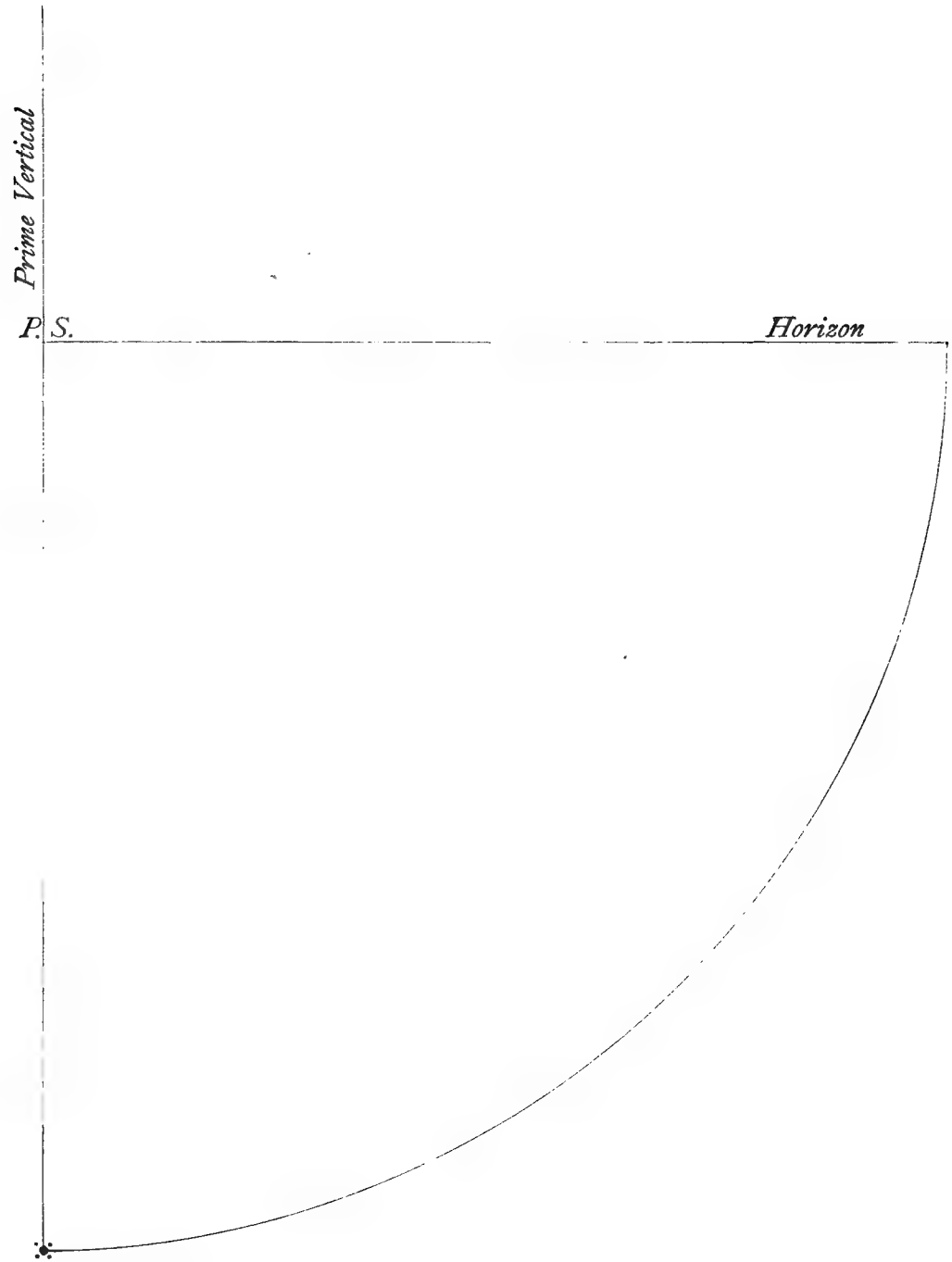
Horizontal Border. — Grecian.





Place in perspective a block of stone—perpendicular height 9 feet, base 6 feet square, nearest corner 7 feet to the right of the observer and 4 feet back from base line, upper face 4 feet square.

SCALE—¼ inch to the foot.

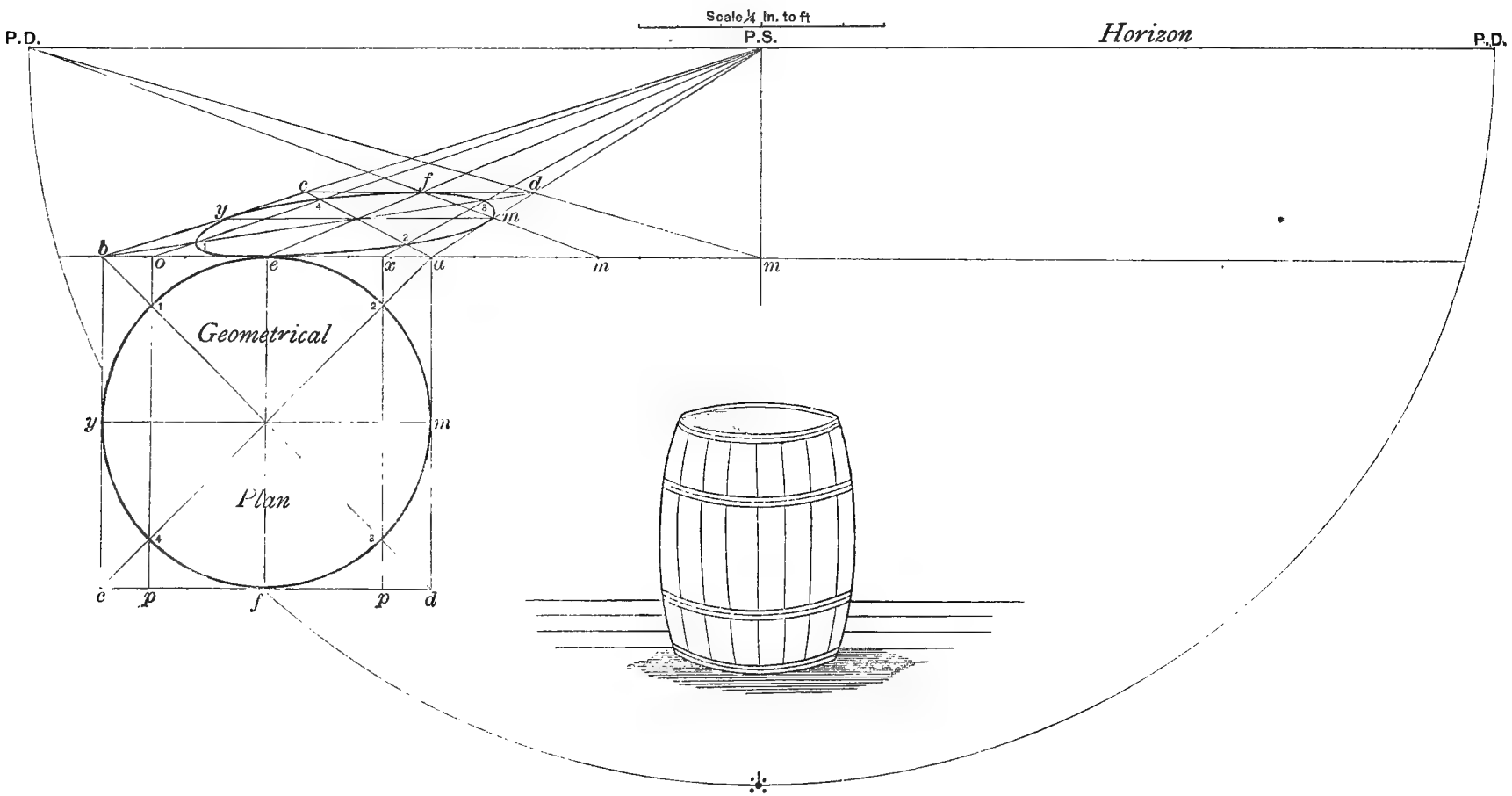


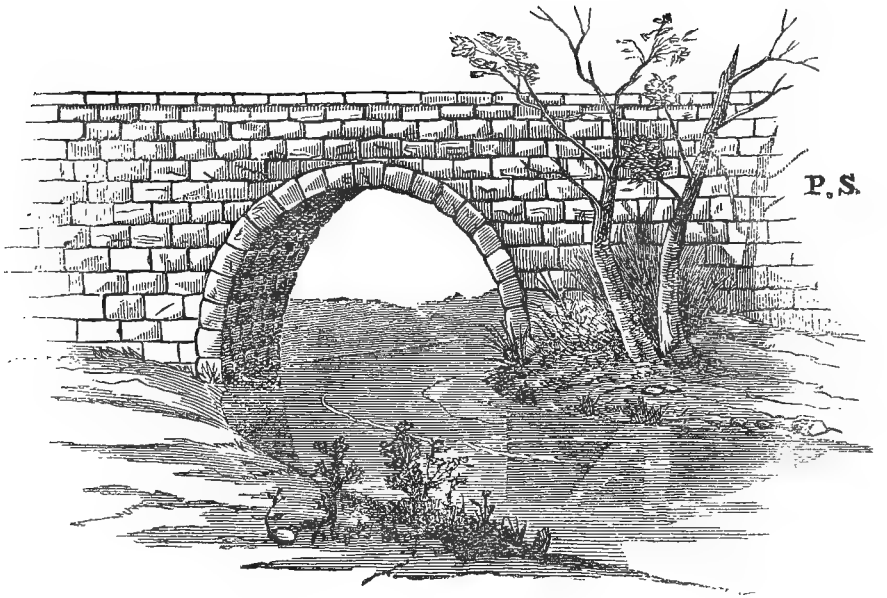
PROBLEM 1.—Place in perspective a circle 8 feet in diameter, (the circle lying flat on the ground plane), the diameter at right angles to the base line 12 feet to the left of the observer.

Locate the point *e* 12 feet to the left of the prime vertical. From *e* draw the vertical line *ef* 8 feet long, and on this diameter draw the circle and complete the geometrical plan. Where the circle and diagonals cross, locate the points 1, 2, 3, and 4, and draw the lines *op* and *xp*. Place in perspective all the lines given in the geometrical plan, locate the points 1, 2, 3, and 4, and through these draw the circle tangent to the square at the points *e*, *m*, *f*, and *y*.

NOTE.—Any polygon may be placed in perspective according to this method.

PROBLEM 2.—Place in perspective a circle 6 feet in diameter, (lying flat on the ground plane), the diameter at right angles to the base line 10 feet to the right of the observer.



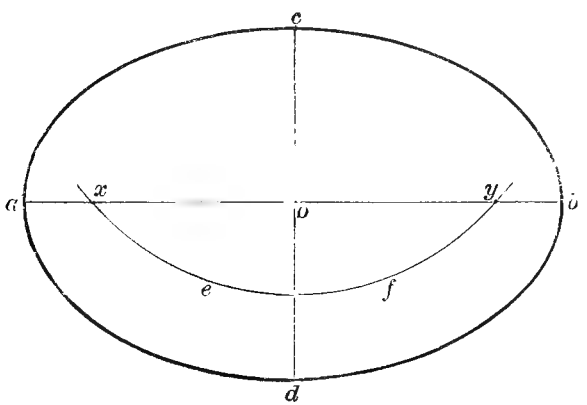

P. S.

An **Ellipse** is an oblong curvilinear figure of regular proportions.

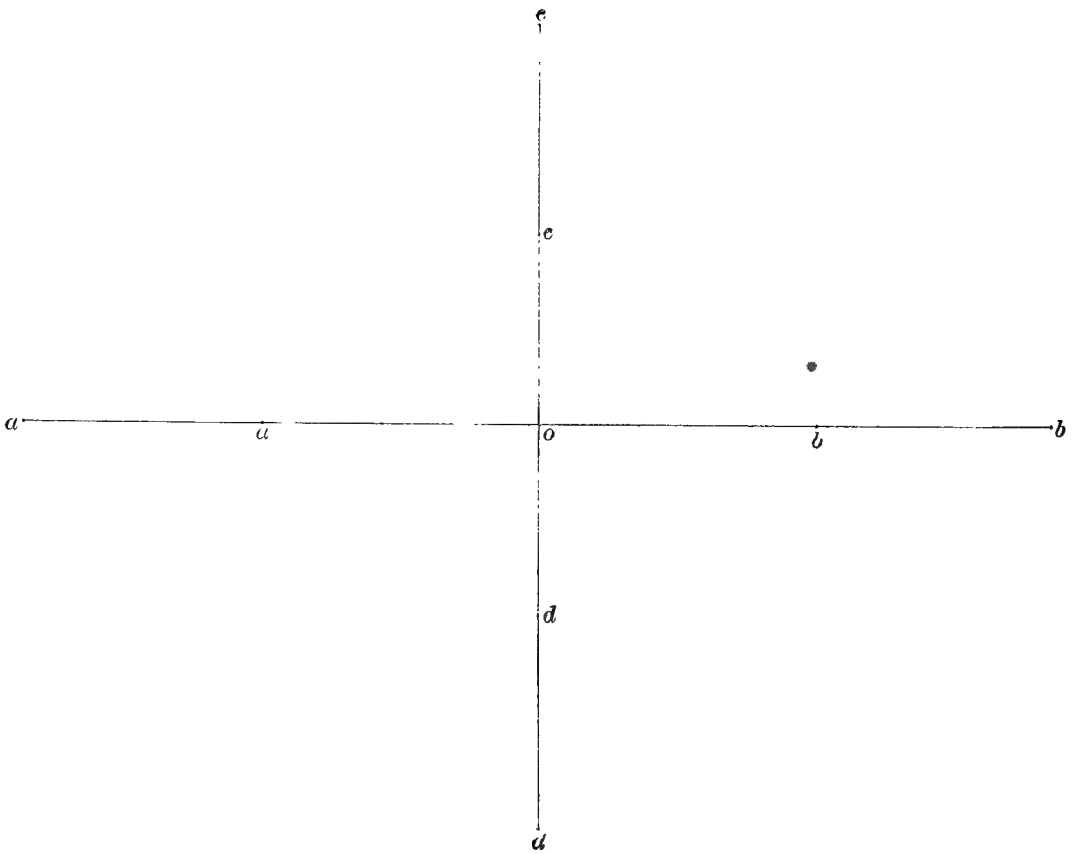
An ellipse is an oval curve, *abcd.* Its diameters divide it into four parts of like size and form.

To describe an ellipse when the axes ab and cd are given.

1st. Find the foci *x* and *y* by describing an arc *xefy* with *c* as a center, and a radius equal to *ao.*



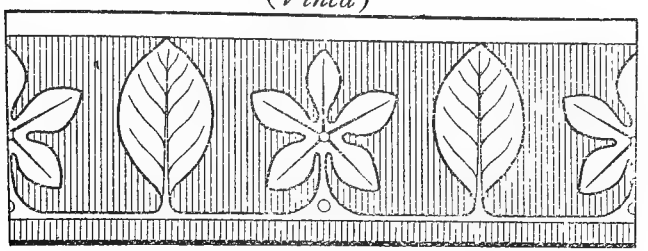
2nd. Take a string equal in length to *ab,* and fasten the extremities at the foci *x* and *y.* Then place a pencil against the string and move it round, bearing tight against the string, and the point of the pencil will describe the ellipse.

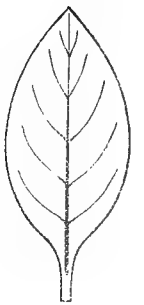


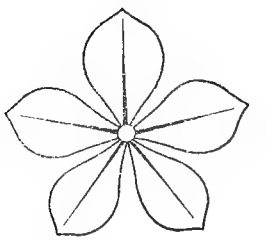
Design for Ceiling Decoration — based on Construction given on page 18.

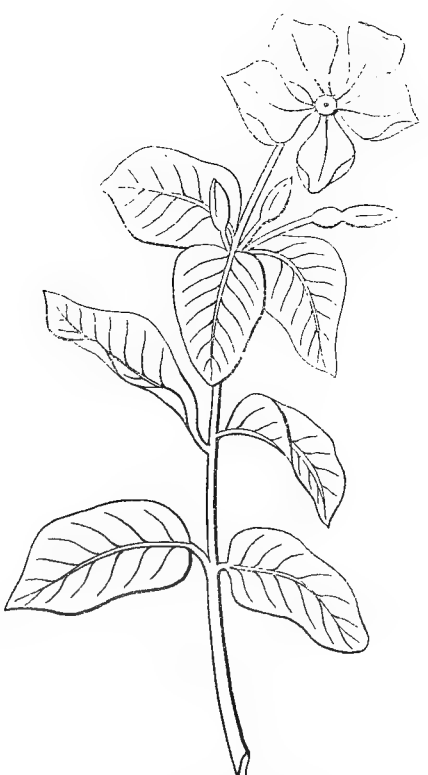
Vinca Alba.

Design for Surface Decoration.
(Vinca)





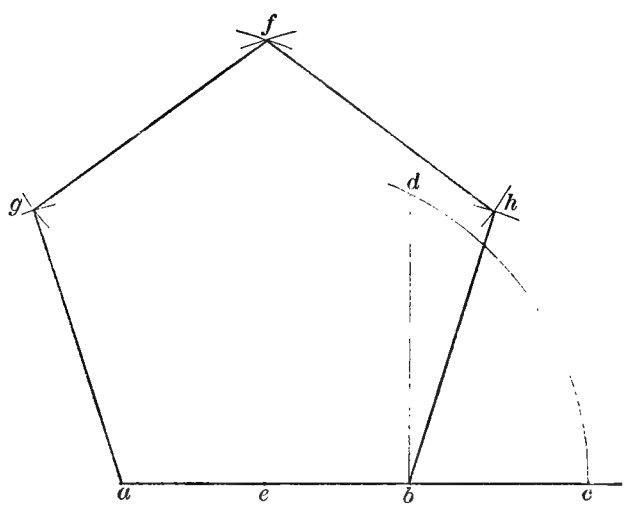




Vinca Alba.

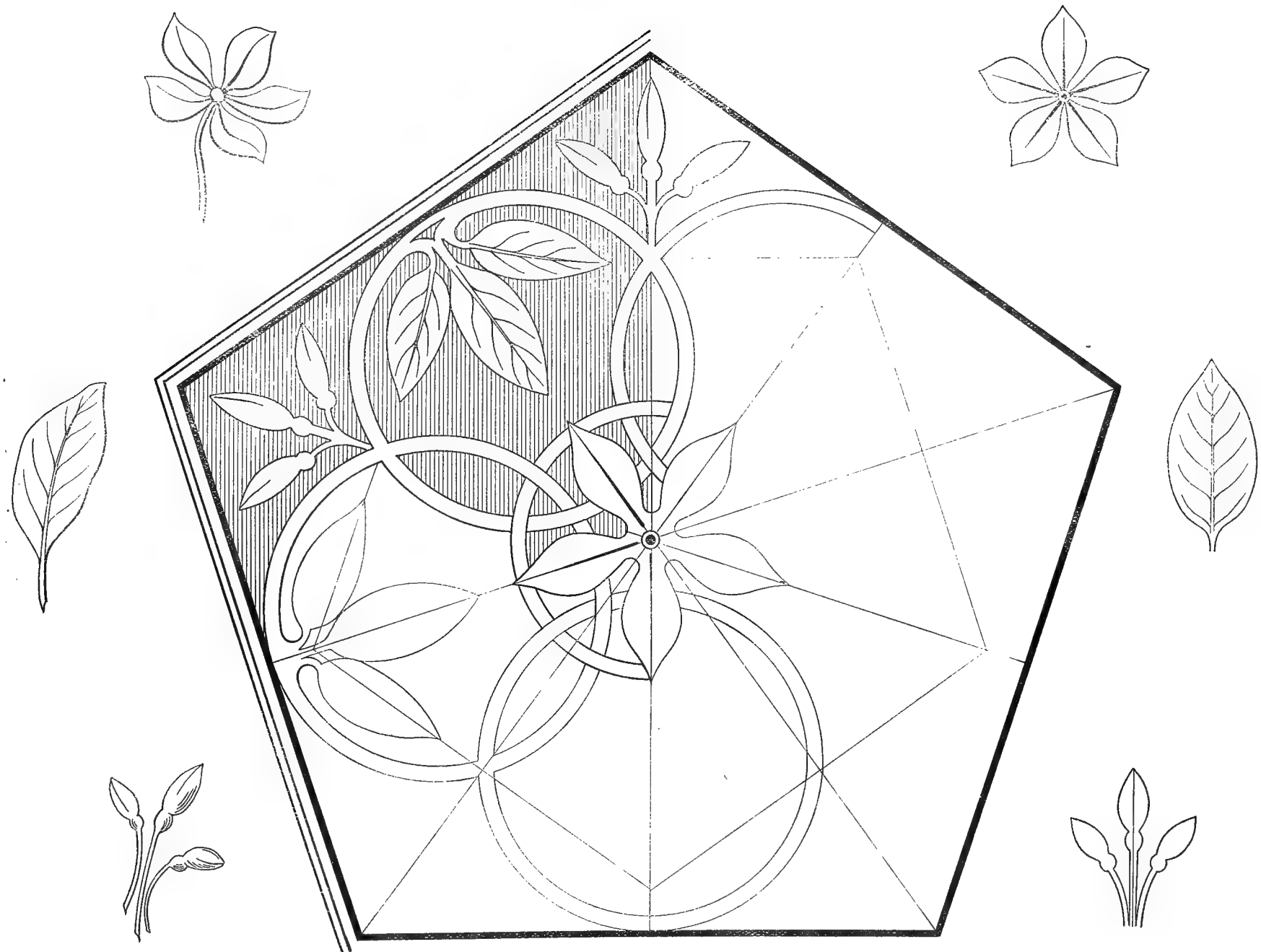
A pentagon is a plane figure bounded by **five straight lines** of equal length.

PROBLEM.—*To construct a pentagon on the line ab.*



Draw the line *ab* and produce it indefinitely. At *b* erect a perpendicular *bd*, equal in length to *ab*. Bisect line *ab*. With *e* as a center and *ed* as a radius, describe the arc *dc*. With *a* and *b* as centers, and a radius equal to *ac*, describe arcs intersecting in *f*, and from *a* and *f*, with a radius equal to *ab*, describe arcs intersecting in *g*; with *f* and *b* as centers, and a radius equal to *ab*, describe arcs intersecting in *h*. Connect the points *a*, *g*, *f*, *h*, and *b*, and the outline of the pentagon is formed.

Construct a pentagon on the line *ab*, and describe semicircles on the lines *gf*, *fh*, *hb*, *ba*, and *ag*.



Design based on the Construction given on page 22.

Rules, Directions and Suggestions.

Design.—As a good design is the expression of the inventive power, and also of an understanding of the principles governing design, it is necessary that the pupil should possess an appreciation of form, a knowledge of the principles of decoration, and a somewhat cultivated taste.

In the first lessons in design, ideas may be taken from patterns in oil-cloth, tiling, wall-paper, calico, fancy cards, covers of books, or from any object that has been decorated with a conventional design. It is advisable for the teacher to show to the pupils the plant forms from which the elements of the design have been taken. If this is not possible, then the natural and conventionalized forms of the principal elements in the pattern should be drawn on the black-board, and the term conventionalized and the difference between natural and conventionalized ornament fully explained. The pupils should be directed to observe the details of ornament, trace out the geometrical form upon which the design is based, and state from what plant-forms the elements of the pattern have been taken. When pupils understand the meaning of the term conventionalize, and are able to conventionalize a plant form, let them select natural forms, conventionalize the leaves and flowers, and with these elements make original designs for surface decoration.

Method of Surface Decoration.—The general forms of the desired decoration should be drawn on a geometrical basis, consistent with the character of the object to be ornamented. This geometrical basis should then be sub-divided and ornamented: this sub-division may be carried to any extent required, until the details can be appreciated by close inspection only.

Rule I.—All decoration should exhibit harmony of design, just proportions, and a fitness for the object ornamented.

Rule II.—Every decoration should aid the expression of the object ornamented.

Rule III.—All surface ornamentation should be based on a geometrical basis.

Rule IV.—Angular forms express harshness, maturity, vigor, and severity. Curved forms express delicacy, grace, and ease.

Rule V.—Flowers or other natural objects should not be used as elements of design, but, instead thereof, forms conventionalized from the natural forms.

NOTE.—The conventional form should retain the characteristic outlines of the form it is intended to represent.

Rule VI.—Decoration should never be constructed without regard the use that is to be made of it.

Rule VII.—Flat tints only should be used in surface decoration.

Perspective.—After several lessons from the printed copies—when the pupils understand the principles governing the positions of the lines in the drawings—the teacher may select a solid, such as a cube, a block, or a cone, to be drawn by the class according to the principles and rules explained in the printed text on pages 17 and 18. These forms or models may be made of wood, tin, or card-board.

The effect of relief is produced by strengthening the lines that bound the right and lower sides of the raised surfaces: the lines that bound the upper and left sides of the raised surfaces are *not* strengthened.

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